REMARKS

Claims 1-43 remain pending in the application.

The Applicants respectfully request that the Examiner reconsider earlier rejections in light of the following amendments and remarks. No new issues are raised nor is further search required as a result of the changes and remarks made herein. Entry of the Amendment is respectfully requested.

Claims 1-43 over Milliken and Rezaiifar

In the Office Action, claims 1-43 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 6,978,384 to Milliken ("Milliken") in view of U.S. Patent No. 6,418,143 to Rezaiifar et al. ("Rezaiifar"). The Applicants respectfully traverse the rejection.

Claims 1-43 recite, *inter alia*, a system and method requiring a **receiving** device to adjust a size of a range of acceptable nonce values within a single **replay attack acceptance window** or a single **replay attack mask**, with the size of the range being based on a determined largest nonce value yet seen.

The Examiner admits that "Milliken fails to explicitly disclose adjusting the size of the window, at the receiving device, based on the largest nonce value yet seen." (Office Action at page 3), but cites Rezaiifar.

Rezaiifar teaches at col. 5, lines 26-36 and col. 6, lines 13-62:

> Within resequencing buffer 92, index L.sub.- V(R) is set to the 12-bit sequence of the next new frame expected. Index L.sub.- V(N) is set to the 12-bit sequence of the next frame needed for sequential delivery, or for which processing is still pending. When a predetermined number of NAK's have been sent without receipt of the corresponding frame, attempted processing of the frame is terminated and the data with the missing frame is passed to the higher layer protocols (e.g., the transport layer). As shown, NAKed frames 96a-c can be received with sequence numbers between L.sub.- V(N) and (L.sub.- V(R)-1) MOD 4096, inclusively.
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> FIG. 5 is a flow chart illustrating the operation of receiver 52 when processing the first transmission of a frame during step 120 of FIG. 4 in accordance with one embodiment of the invention. The first transmission processing begins at step 150 and at step 152 L_SEQ is set according to the following equation:

where V(R) is the eight least significant bits of L_V(R) and SEQ is the sequence number contained in the SEQ field of the frame being processed. At step 154 it is determined whether L.sub.- SEQ is less than L_V(N) or that the frame has been stored in the resequencing buffer. If so, the frame is discarded at step 156 and the receive system returns from first transmission processing at step 157. As noted above, L_V(N) is set to the next frame needed for sequential delivery of the data.

If L.sub.- SEQ is not less than L_V(N) and the frame has not been stored in the resequencing buffer, it is further determined at step 158 whether L.sub.- SEQ is greater than or equal to L_V(N) and less than L_V(R), and whether the frame has been not stored in the resequencing buffer, and if so the frame is discarded at step 156 and the receive system returns from first transmission processing at step 157. Otherwise, it is further determined at step 160 whether L_SEQ equals L_V(R) and therefore is the next frame needed for sequential delivery L_V(R).

If L_SEQ does not equal L_V(R), an out of order frame has been received, and the frame is stored in the resequencing buffer at step 162 and L_V(R) is set to L_SEQ at step 164. At step 166, the receive system transmits one or more NAK messages requesting retransmission of all unreceived frames from L_V(N) to (L_V(R)-1) MOD 4096 inclusive. The receive system then returns from the first transmission processing at step 176.

If, at step 160, it is determined that L.sub.- SEQ equals L_V(R) the frame has been received in order, causing it to further be determined at step 170 whether L_V(N) equals L_V(R) indicating no NAKed frames are outstanding. If L_V(N) equals L_V(R), L_N(N) and L_V(R) are incremented MOD 4096 at step 172. The data frame is delivered to the higher layer protocol at step 174 and the receiver returns from first transmit processing at step 176.

If it is determined at step 160 that L_V(N) does not equals L_V(R), and therefore that NAKed frames remain outstanding, L_V(R) is incremented MOD 4096 at step 178, and at step 180 the frame is stored in the resequencing buffer. The receiver 52 then returns from the first frame transmit processing at step 176.

Rezaiifar teaches use of a sequence number, SEQ, as a basis to determine if a received frame is sequentially received. Rezaiifar fails to mention any window or mask, much less **adjustment** of a window or mask. Rezaiifar fails to teach or suggest a system and method requiring a **receiving** device to adjust a size of a range of acceptable nonce values within a single **replay attack acceptance window** or a single **replay attack mask**, with the size of the range being based on a determined largest nonce value yet seen, as required by claims 1-43.

Milliken and Rezaiifar, either alone or in combination, fail to disclose, teach or suggest a system and method requiring a **receiving** device to adjust a size of a range of acceptable nonce values within a single **replay attack acceptance window** or a single **replay attack mask**, with the size of the range being based on a determined largest nonce value yet seen, as recited by claims 1-43.

A benefit of requiring a **receiving** device to adjust a size of a range of acceptable nonce values within a single **replay attack acceptance window** or a single **replay attack mask**, with the size of the range being based on a determined largest nonce value yet seen is, e.g., to reduce confusion between sessions. Adjusting the **size of a range** of a single **replay attack acceptance window** or a single **replay attack mask**, such as when starting a new session or when resetting a nonce value, permits new advantages. For instance, a previous session's large nonce value may play havoc on a new session starting with small nonce values. When switching sessions to restrict acceptance of a previous session's large nonce values the inventors have discovered that there are advantages to narrow an acceptance window or replay mask. Then once a session is underway, it is found that a single acceptance window or a single replay mask should be increased to prevent unnecessary rejection of data associated with nonce values. The cited prior art fails to disclose or suggest the claimed features.

Accordingly, for at least all the above reasons, claims 1-43 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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